WHAT IS CLAIMED IS:

1. A stereomicroscope, comprising:

a first beam path and a second beam path;

a beam splitter disposed in the first and second beam paths, wherein the two beam paths are geometrically superimposable with a third beam path; and

a non-reflective, rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making a given first or second beam path passable by light or blocking said given first or second beam path in a light-tight manner.

2. The stereomicroscope according to claim 1, wherein the non-reflective, rotating shutter has a plurality of opaque and transmissive regions, wherein a rotation speed of the shutter is reduceable.

3. The stereomicroscope according to claim 1, further comprising:

a first deflecting mirror disposed in the first beam path; and

a second deflecting mirror disposed in the second beam path, wherein the first and second beam paths are superimposable at a location proximate to a position of the beam splitter.

4. The stereomicroscope according to claim 1, further comprising:

an image recording device disposed in the third beam path; and

a shutter motor to drive said rotating shutter.

5. The stereomicroscope according to claim 4, wherein the shutter motor is driven in synchronization with a reading of the image recording device.

6. A stereomicroscope, comprising:

a first beam path and a second beam path;

a beam splitter disposed in the first and second beam paths, wherein the two beam paths are geometrically superimposable with a third beam path; and

a switching element having at least two shutter lamellae, one for each of the first and second beam paths, respectively, for alternately making a given first or

second beam path passable by light or blocking said given first or second beam path in a light-tight manner.

7. A stereomicroscope, comprising:

a first beam path and a second beam path;

a beam splitter disposed in the first and second beam paths, wherein the two beam paths are geometrically superimposable with a third beam path;

a switching element comprising an aperture diaphragm disposed in the first and second beam paths; and

a reciprocating drive to displace the switching element in an oscillating manner, for alternately making a given first or second beam path passable by light or blocking said given first or second beam path in a light-tight manner.

8. The stereomicroscope according to claim 7, wherein the aperture diaphragm comprises a substrate having first and second blocking areas.

9. The stereomicroscope according to claim 8, wherein the substrate is constructed of a glass disk.

10. The stereomicroscope according to claim 8, wherein the substrate is constructed of metal, wherein the aperture diaphragm is formed from stamping out a portion of a metal substrate.

11. A stereomicroscope, comprising:

a first beam path and a second beam path;

a first beam splitter disposed in the first and second beam paths, wherein the two beam paths are geometrically superimposable with a third beam path;

a rotating shutter, wherein said shutter comprises at least one aperture diaphragm for alternately making a given first or second beam path passable by light or blocking said given first or second beam path in a light-tight manner; and

a display to provide image information to the first and second beam paths.

12. The stereomicroscope according to claim 11, further comprising:

left and right eyepieces;

a second beam splitter disposed in the first beam path; and

a third beam splitter disposed in the second beam path, wherein the image information from the display is viewed by an observer through the eyepieces.

13. The stereomicroscope according to claim 12, wherein the image information from the display is provided to the observer in left and right frames in a time sequence to provide a stereoscopic image .

14. The stereomicroscope according to claim 12, further comprising:

a first prism disposed in the first beam path; and

a second prism in the second beam path; wherein the prisms guide the image information into respective eyepieces.

15. The stereomicroscope according to claim 14, wherein the prisms are each 30 degree prisms.

16. The stereomicroscope according to claim 11, wherein the shutter is one half transmissive and the other half black and opaque.

17. The stereomicroscope according to claim 11, wherein the first beam splitter is a pupil splitter having two deflective mirrors to deflect one half of the image information along the first beam path and the other half of the image information along the second beam path.